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| **Unit Title:** Geometry and Measurement | **Pacing (Duration of Unit): 10 weeks** |

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| **Desired Results** |

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| **Transfer Goals (**Priority practice standards in **bold)** |
| *Students will be able to independently use their learning to:*   1. Make sense of problems and persevere in solving them. 2. **Reason abstractly and quantitatively.** 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. **Use appropriate tools strategically.** 6. **Attend to precision.** 7. **Look for and make use of structure.** 8. Look for and express regularity in repeated reasoning. |

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| **Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)** |

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| **Prerequisite Standards:**   * K.MD.2: Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.* * K.MD.3: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. * K.G.4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). * K.G.5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. * K.G.6: Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?”* | **WIDA for English Language Learners**  Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting  Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**  In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports. |
| **Standards (**Priority Standards in **bold):**   * **1.NBT.4: Add within 100, including adding a two-digit number and a one-digit number, and adding a two- digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.** * **1.MD.1: Order three objects by length; compare the lengths of two objects indirectly by using a third object.** * **1.MD.2: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*** * **1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks.** * **1.MD.4: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.** * **1.MD.MA.5: Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to 5 pennies). Use appropriate notation (e.g., 69¢). Use the values of coins in the solutions of problems.** * **1.G.1: Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non- defining attributes (e.g., color, orientation, overall size); build and draw shapes that possess defining attributes.** * **1.G.2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.** * **1.G.3: Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.** * 1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. * 1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. * 1.OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). * 1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:   + 1.NBT. 2a: 10 can be thought of as a bundle of ten ones—called a “ten.”   + 1.NBT.2b: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.   + 1.NBT.2c: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). |  |

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| **Meaning (\*Mostly assessed through Performance Tasks/Assessments)** |

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| **Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)   * Time can be represented in digital or analog form. We divide the day into hours, minutes, and seconds. * Coins have different values, and those values can be compared. * Two and three-dimensional objects (with or without curved surfaces) can be described, classified, and analyzed by their attributes. * Fractions are equal parts of a whole. | **Essential Questions:** (Questions which frame ongoing and important inquires about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)   * Why do we measure objects? * What is time? * Why do we use money? * How can fractions be used to name parts of a whole object? * How can graphs be used to show data and answer questions? * How can shapes and solids be described and used to make other shapes? |

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| **Acquisition (\*Mostly assessed through traditional summative assessments)** | |
| **Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.  *Students will know …*   * That objects can be compared and ordered by length. * That two objects can be compared by using a third object. * That objects can be measured with non-standard units with no gaps or overlaps. * That data can be collected, organized, and interpreted. * That data can be represented visually using tables, charts and graphs. * That data can be used to solve problems. * That shapes and objects are defined by their attributes. * That whole units can be divided into equal parts called fractions.   **Key Academic Vocabulary**:   * Time: Analog, digital, hour hand, minute hand * Geometry   + Rectangle   + Square   + Trapezoid   + Half-circle/semicircle   + Quarter-circles   + Cube   + Right rectangular prism   + Right circular cone   + Right circular cylinder   + Corner/vertex (vertices)   + Side/edge   + Surface/face * Fractions: halves, fourths, quarters, whole | **Skills:** The discrete skills and process students should be able to use independently.  *Students will be skilled at:*   * Measuring objects and comparing length of objects. * Telling time to the hour and half hour on digital and analog clocks. * Defining attributes in shapes and objects. * Composing two-dimensional and three-dimensional shapes to create new shapes. * Dividing wholes into equal shares (halves and fourths/quarters). * Adding a one digit to a two-digit number, and a two-digit number to a multiple of 10, and be able to explain reasoning. * Using addition and subtraction within 20 to solve word problems. * Fluently adding and subtracting within 10. * Using mental strategies to compose and decompose numbers within 20. * Using place value understanding to add and subtract numbers. |

**Resource Suggestions:**

**K-5 Math Resources** <http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>

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| Standard(s) | Link |
| 1.MD.1 | [Which is Longest?](http://www.k-5mathteachingresources.com/support-files/which-is-longest.pdf)  [Scoop and Order](http://www.k-5mathteachingresources.com/support-files/scoop-and-order.pdf) |
| 1.MD.2 | [Measuring with Sticks](http://www.k-5mathteachingresources.com/support-files/measuringwithsticks.pdf)  [Measuring Shoes](http://www.k-5mathteachingresources.com/support-files/measuringshoes.pdf)  [Measuring with Connecting Cubes](http://www.k-5mathteachingresources.com/support-files/measuringwithcubes.pdf)  [Measuring with Dominoes](http://www.k-5mathteachingresources.com/support-files/measuringwithdominoes.pdf) |
| 1.MD.3 | [My Favorite Time of Day](http://www.k-5mathteachingresources.com/support-files/my-favorite-time-of-day.pdf)  [Time Barrier Game](http://www.k-5mathteachingresources.com/support-files/timebarriergame.pdf)  [Time Barrier Game Grid](http://www.k-5mathteachingresources.com/support-files/timebarriergamegrid.pdf) |
| 1.MD.4 | [Duck! Rabbit!](http://www.k-5mathteachingresources.com/support-files/duck-rabbit.pdf) |
| 1.G.1 | [Geoboard Squares](http://www.k-5mathteachingresources.com/support-files/geoboardsquares.pdf)  [Comparing Polygons Writing Template](http://www.k-5mathteachingresources.com/support-files/comparingpolygonswritingsheet.pdf)  [My 3D Shapes Book](http://www.k-5mathteachingresources.com/support-files/my3dshapesbook.pdf)  [Comparing 3D Shapes Writing Template](http://www.k-5mathteachingresources.com/support-files/comparing3dshapeswritingsheet.pdf)  [Shape Patterns](http://www.k-5mathteachingresources.com/support-files/shape-patterns.pdf) |
| 1.G.2 | [Pattern Block Numbers](http://www.k-5mathteachingresources.com/support-files/pattern-block-numbers.pdf)  [Pattern Block Triangles](http://www.k-5mathteachingresources.com/support-files/pattern-block-triangles.pdf)  [Fold a Square](http://www.k-5mathteachingresources.com/support-files/fold-a-square-1g2.pdf)  [Cover a Hexagon](http://www.k-5mathteachingresources.com/support-files/coverahexagon.pdf)  [Tangram Squares](http://www.k-5mathteachingresources.com/support-files/tangramsquares.pdf)  [Tangram Triangles](http://www.k-5mathteachingresources.com/support-files/tangramtriangles.pdf) |
| 1.G.3 | [Fraction Pictures](http://www.k-5mathteachingresources.com/support-files/fraction-pictures-1g3.pdf)  [Make a Pizza](http://www.k-5mathteachingresources.com/support-files/make-a-pizza-1g3.pdf) |

**Illustrative Math**:<https://www.illustrativemathematics.org/1>

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| **STANDARDS** | **LINK** |
| **1.MD.2** | [1.MD How Long?](https://www.illustrativemathematics.org/illustrations/797)  [1.MD Measure Me!](https://www.illustrativemathematics.org/illustrations/688)  [1.MD Growing Bean Plants](https://www.illustrativemathematics.org/illustrations/1086)  [1.OA Measuring Blocks](https://www.illustrativemathematics.org/illustrations/981) |
| **1.MD.4** | [1.MD Favorite Ice Cream Flavor](https://www.illustrativemathematics.org/illustrations/506)  [1.MD Weather Graph Data](https://www.illustrativemathematics.org/illustrations/1233) |
| **1.G.1** | [1.G 3-D Shape Sort](https://www.illustrativemathematics.org/illustrations/1104)  [1.G All vs. Only some](https://www.illustrativemathematics.org/illustrations/752) |
| **1.G.2** | [1.G Overlapping Rectangles](https://www.illustrativemathematics.org/illustrations/901)  [1.G Counting Squares](https://www.illustrativemathematics.org/illustrations/1164)  [1.G Make Your Own Puzzle](https://www.illustrativemathematics.org/illustrations/756)  [1.G Grandfather Tang's Story](https://www.illustrativemathematics.org/illustrations/1311) |

**Technology (VIDEOS)**

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| STANDARD | LINK |
| 1.MD.1 | <http://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-measurement> |
| 1.MD.2 | <http://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-measurement> |
| 1.MD.3 | <http://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-time-money-topic> |
| 1.MD.4 | <http://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-data> |
| 1.G.1 | <http://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-recognizing-shapes> |
| 1.G.2 | <http://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-recognizing-shapes> |
| 1.G.3 | <http://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-composing-shapes> |
| 1.MD.MA.5 | <http://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-time-money-topic> |

**enVision**

Lesson 12-1 (comparing and ordering by length)

Lesson 12-4 (measuring length)

Topic 13 (time)

Lesson 15-5 (making new shapes from shapes)

Topic 16 (fractions of shapes)

Topic 14 (using data to answer questions)